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MANAGEMENT IN CONFIDENCE

LOOSE MINUTE

D/DMS(N)/1/1/5B

8 Feb 89

SEC(FS)/A

Copy to:  
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DGSR/SUBS 11  
AD Science (NUC)1

DISPOSAL OF DECOMMISSIONED NUCLEAR SUBMARINE

Ref: D/SEC(FS)/24/3/1/1 dated 1 Feb 89.

1. The number of places meeting the criteria listed in Ref para 4 is very small, but some of them have the advantage of a degree of shelter from bad weather and ocean swell.
2. Initial disposal is easy, as the vessels can be prepared with the capability to be ballasted to about 10 tonnes negative buoyancy and be lowered gently to the seabed. Lowering lines could then be disconnected and valves be opened to flood the boat throughout to prevent any movement.
3. Recovery would be a much more daunting task and would require careful and expensive preparation.
  - a. To guarantee the ability to recover, all post-dumping flood lines and valves would have to be non-ferrous to guard against long-term corrosion. Special dewatering spill pipes, air supply lines and control valves would have to be fitted in every compartment and they also would have to be non-ferrous.
  - b. The clench plates or securing lugs used to suspend and lower each boat would have to be sufficiently substantial to:
    - (i) accept some degree of corrosion without losing too much strength
    - (ii) have sufficient strength to exert up to 100 tons force to break the seabed suction which will have occurred during many years of repose in the mud.
4. Given the foregoing preparations, existing Salvage Vessels could cope with sinking and recovery, using the ADS(JIM) submersible for the underwater work. The only additional expense would be for adequate air hoses and high volume air compressors providing air at 500 psig (36 bar), f6OK approx.
5. The procedure would be to fit air hoses to each air inlet, open inlet and spill valves and dewater by carefully controlled blowing until a negative buoyancy of some 100 tons is achieved (this would be a very approximate figure, but is not critical). Thereafter, lifting wires would be attached to the lugs and a power lift applied to surface the vessel, expulsion of the remaining floodwater being by means of air expansion as the ambient pressure reduced during the lift. Once at the surface positive buoyancy could be restored.

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